

§ 177.1650

(f) *Nonapplicability.* The provisions of this section are not applicable to polystyrene and rubber-modified polystyrene used in food-packaging adhesives complying with §175.105 of this chapter.

§ 177.1650 Polysulfide polymer-polyepoxy resins.

Polysulfide polymer-polyepoxy resins may be safely used as the food-contact surface of articles intended for packaging, transporting, holding, or otherwise contacting dry food, in accordance with the following prescribed conditions:

(a) Polysulfide polymer-polyepoxy resins are the reaction products of liquid polysulfide polymers and polyfunctional epoxide resins, cured with the aid of tri(dimethylaminomethyl) phenol, to which have been added certain optional substances to impart desired technological properties to the resins. Subject to any limitations prescribed in this section, the optional substances may include:

- (1) Substances generally recognized as safe in food and food packaging.
- (2) Substances the use of which is permitted under applicable regulations in this part, prior sanctions, or approvals.
- (3) Substances named in this subparagraph and further identified as required:

List of substances	Limitations
Bis(2-chloroethyl) formal .	Cross-linking agent.
Bis(dichloropropyl) formal	
Butyl alcohol	Solvent.
Carbon black (channel process) .	Cross-linking agent.
Chlorinated paraffins	
Epoxidized linseed oil .	
Epoxidized soybean oil .	
Epoxy resins (as listed in § 175.300(b)(3)(viii)(a) of this chapter) .	Solvent.
Ethylene glycol monobutyl ether	
Magnesium chloride .	
Methyl isobutyl ketone	Solvent.
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt .	
Sodium dibutyl naphthalene sulfonate .	Wetting agent.
Sodium hydrosulfide .	
Sodium polysulfide .	Cross-linking agent.
β,β',γ,γ'-Tetrachloro normal propyl ether .	
Titanium dioxide .	
Toluene	Solvent.
Trichloroethane	Cross-linking agent.
1,2,3-Trichloropropane	
Urea-formaldehyde resins .	Do.

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List of substances	Limitations
Xylene	Solvent.

(b) The resins are used as the food-contact surface for dry food.

(c) An appropriate sample of the finished resin in the form in which it contacts food, when subjected to ASTM method D968-81, "Standard Test Methods for Abrasion Resistance of Organic Coatings by the Falling Abrasive Tester," which is incorporated by reference (copies may be obtained from the American Society for Testing Materials, 1916 Race St., Philadelphia, PA 19103, or may be examined at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20408), using No. 50 Emery abrasive in lieu of Ottawa sand, shall exhibit and abrasion coefficient of not less than 20 liters per mil of film thickness.

[42 FR 14572, Mar. 15, 1977, as amended at 49 FR 10110, Mar. 19, 1984]

§ 177.1655 Polysulfone resins.

Polysulfone resins identified in paragraph (a) of this section may be safely used as articles or components of articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, polysulfone resins are:

(1) Poly(oxy-*p*-phenylenesulfonyl-*p*-phenyleneoxy-*p*-phenyleneisopropylidene-*p*-phenylene) resins (CAS Reg. No. 25154-01-2) consisting of basic resins produced when the disodium salt of 4,4'-isopropylidenediphenol is made to react with 4,4'-dichlorodiphenyl sulfone in such a way that the finished resins have a minimum number average molecular weight of 15,000, as determined by osmotic pressure in monochlorobenzene; or

(2) 1,1'-Sulfonylbis[4-chlorobenzene] polymer with 4,4'-(1-methylethylidene)bis[phenol] (minimum 92 percent) and 4,4'-sulfonylbis[phenol] (maximum 8 percent) (CAS Reg. No. 88285-91-0) produced when a mixture of 4,4'-isopropylidenediphenol (minimum 92 percent) and 4,4'-sulfonylbis[phenol] (maximum 8 percent) is made to react with 4,4'-dichlorodiphenyl sulfone in